

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning at page 7, line 15 with the following:

This invention provides the cells, cell culture, tissues, tissue culture, seed, whole plant and plant parts of alfalfa germplasm designated 'CW ~~83201~~83021' and having ATCC Accession No. PTA-5347.

Please replace the paragraph beginning at page 8, line 6 with the following:

This invention also provides a cell, cell culture, tissue, and/or tissue culture of regenerable cells, the cells comprising genetic material from a synthetic variety alfalfa plant named 'CW ~~83201~~83021', wherein the cells regenerate plants having all or substantially all of the morphological and physiological characteristics of the synthetic alfalfa variety named CW 83021, the seed of which have been deposited and have ATCC Accession No. PTA-5347.

Please replace the paragraph beginning at page 11, line 23 with the following:

On July 25, 2003, at least 2,500 seeds of each of four different alfalfa varieties were deposited under the conditions of the Budapest Treaty with the American Type Culture Collection (ATCC), 10801 University Blvd., Manassas, VA 20110-2209. The following four seed deposits are exemplary of the instant invention:

Seed of alfalfa germplasm designated 'CW 75046' has been given ATCC No. PTA-5346.

Seed of alfalfa germplasm designated 'CW ~~83201~~83021' has been given ATCC No. PTA-5347.

Seed of alfalfa germplasm designated 'CW 85029' has been given ATCC No. PTA-5348.

Seed of alfalfa germplasm designated 'CW 95026' has been given ATCC No. PTA-5349.

Please replace the paragraph beginning at page 13, line 19 with the following:

Recovery After Spring Green-up or After Harvest (REC). Recovery after spring green-up or after harvest is the rate of re-growth after spring green-up or after harvest as determined by measuring plant height at varying intervals and then comparing growth with check varieties. Slow Recovery after spring green-up or after harvest = 'Vernal'; Moderate Recovery after spring green-up or after harvest = 'WinterGold' and 'Hybri-Force 400', Fast Recovery after spring green-up or after harvest = 'CW 75046' and 'CW 95026' and Very Fast Recovery after spring green-up or after harvest = '~~83201~~83021' and 'CW 85029'.

Please replace the title of Table 1 beginning at page 15, line 7 with the following:

Table 1. The recovery of alfalfa varieties 'CW 75046', '~~83201~~83021', and 'CW 85029' as compared to check variety 'WinterGold' when grown at the same time in the same location. E99WIWS - Spring Forage Yield Trial at West Salem, WI.

Please replace the title of Table 3 beginning at page 15, line 18 with the following:

Table 3. The recovery of alfalfa varieties 'CW 75046', 'CW ~~83201~~83021', 'CW 85029', and 'CW 95026' compared to check varieties 'Vernal', 'WinterGold' and 'WL 325HQ' when grown at the same time in the same location. A01WIWS - Spring Forage Yield Trial at West Salem, WI.

Please replace the title of Table 4 and Table 4 beginning at page 16, line 2 with the following:

Table 4. The recovery of alfalfa varieties 'CW 75046', 'CW ~~83201~~83021', 'CW 85029', and 'CW 95026' compared to check varieties 'Daisy', 'Diane', 'Europe', '~~Marshall~~Marshall', 'Mercedes', 'Vernal', 'WinterGold', and 'WL 325HQ' when grown at the same time in the same location. E01WIWS - Spring Forage Yield Trial at West Salem, WI.

Variety	Crops 2, 3, average cm/day up to 21 days post harvest.	% of check WinterGold
CW 75046	1.94	112
CW 83021	2.23	129
CW 85029	2.31	134

CW 95026	1.92	111
Daisy	1.44	083
Diane	1.57	091
Europe	1.52	088
Marshall Marshall	1.48	085
Mercedes	1.52	088
Vernal	1.32	076
WinterGold	1.73	100
WL 325HQ	1.72	100

Please replace the title of Table 5 beginning at page 16, line 9 with the following:

Table 5. The recovery of alfalfa varieties ‘CW ~~83201~~83021’ and ‘CW 95026’ compared to check varieties ‘Evergreen’, ‘HybriForce 400’, ‘Vernal’, ‘WinterGold’, and ‘WL 325HQ’ when grown at the same time in the same location. T01WIWS - Spring Forage Yield Trial at West Salem, WI.

Please replace the title of Table 7a beginning at page 19, line 8 with the following:

Table 7a. The standability of alfalfa varieties ‘CW 95026’, ‘CW 75046’, ‘CW ~~83201~~83021’, and ‘CW 85029’ as compared to commercially available check varieties all grown at the same time in the same location. A01WIWS - Spring Forage Yield Trial at West Salem, WI.

Please replace the title of Table 7b beginning at page 20, line 1 with the following:

Table 7b. The standability of alfalfa varieties ‘CW 95026’, ‘CW 75046’, ‘CW ~~83201~~83021’, and ‘CW 85029’ as compared to commercially available check varieties all grown at the same time in the same location. A02WIWS - Spring Forage Yield Trial at West Salem, WI.

Please replace the title of Table 7c beginning at page 21, line 1 with the following:

Table 7c. The standability of alfalfa varieties ‘CW 95026’, ‘CW 75046’, ‘CW ~~83201~~83021’, and ‘CW 85029’ as compared to commercially available check varieties all grown at the same time in the same location. E99WIWS - Spring Forage Yield Trial at West Salem, WI.

Please replace the title of Table 7d and Table 7d beginning at page 22, line 1 with the following:

Table 7d. The standability of alfalfa varieties 'CW 95026', 'CW 75046', 'CW ~~83201~~83021', and 'CW 85029' as compared to commercially available check varieties all grown at the same time in the same location. E01WIWS - Spring Forage Yield Trial at West Salem WI.

Date Last Cut/ Spring greenup # days	August 6 Year 1 35	June 6 Year 2 33	July 7 Year 2 41	July 7 Year 2 48	August 27 Year 2 48	Average Year 2 43
growing Date Rated	September 10	July 9	August 20	August 27	October 14	
Entry	Standability Ratings					
Europe	8.50	7.00	8.50	8.50	9.00	8.25
CW 04007	8.00	7.50	8.50	8.00	8.75	8.19
CW 05008	7.50	6.50	7.50	8.50	8.75	7.81
Marshall <u>Marshall</u>	5.50	6.50	8.00	7.50	7.75	7.44
Aubigny	6.00	6.00	7.50	7.00	8.00	7.12
Diane	5.50	6.50	7.50	6.50	7.50	7.00
Daisy	6.50	6.50	7.00	7.50	6.75	6.94
Mercedes	6.00	5.00	6.50	8.00	7.50	6.75
CW 95026	6.50	6.50	7.50	5.50	7.00	6.62
CW 74000	6.50	6.00	6.50	6.50	7.50	6.62
CW 95127	5.00	6.50	5.00	6.50	6.75	6.19
CW 95125	4.50	6.00	6.00	5.50	6.00	5.88
CW 75047	4.50	5.50	6.00	5.50	6.25	5.81
CW 75046	5.00	3.50	6.50	5.00	6.25	5.31
CW 95126	5.50	6.50	5.00	3.50	5.75	5.19
CW 95124	5.00	6.00	4.50	4.50	5.75	5.19
CW 95123	5.00	5.00	4.50	4.50	5.75	4.94
CW 83021	5.00	4.00	4.50	2.50	4.00	3.75
CW 85029	4.00	3.50	4.00	2.50	3.25	3.31
Vernal	2.50	3.50	5.00	3.00	1.50	3.25
WinterGold	2.50	3.00	3.00	2.50	4.00	3.13
WL 325HQ	0.50	4.00	2.50	1.50	2.75	2.69
CW 92012	0.50	3.00	1.00	0.50	1.00	1.38
Grand Mean	4.96	5.42	5.69	5.15	5.91	5.55
LSD (0.05)	1.10	1.99	1.49	1.45	1.13	0.84
C.V. (%)	15.73	26.01	18.54	19.88	13.56	10.67
R2	0.90	0.58	0.82	0.87	0.91	0.93

Please replace the paragraph beginning at page 29, line 13 with the following:

Alfalfa Variety ‘CW ~~83201~~83021’

‘CW ~~83201~~83021’ is a high yielding, persistent alfalfa variety with improved standability and fast recovery after harvest with no observed soil type or management limitations. ‘CW ~~83201~~83021’ is a synthetic variety with 225 parent plants that were selected sequentially for multifoliate leaf expression and for resistance to Phytophthora root. Parent plants were selected from crosses between selections from three year old Wisconsin nurseries for winter survival, leaf disease resistance, healthy green color, fast recovery after harvest, and high standability; and from crosses between the nursery selections and selections from three year old Wisconsin and Minnesota yield trials for moderate fall dormancy, good agronomic appearance, fast recovery, high leaf to stem ratio, resistance to crown rot, Bacterial wilt, Fusarium wilt, and Verticillium wilt.

Please replace the paragraph beginning at page 31, line 26 with the following:

The above method produced alfalfa variety ‘CW ~~83201~~83021’. The primary uses of plants of the ‘CW ~~83201~~83021’ variety are for hay, haylage, greenchop, and dehydration. ‘CW ~~83201~~83021’ is adapted to the North Central, East Central, and Great Plains areas of the U.S. and is intended for use in the North Central, East Central, Great Plains, and moderately winter-hardy intermountain areas of the U.S. and in Canada. ‘CW ~~83201~~83021’ has been tested in California, Nebraska, Pennsylvania, South Dakota, and Wisconsin.

Please replace the paragraph beginning at page 32, line 3 with the following:

‘CW ~~83201~~83021’ is a moderate dormant variety with fall dormancy similar to FD class 4 check varieties. Flower color observed in the Syn.2 generation is approximately: greater than 99% purple, with a trace of variegated, white, cream, and yellow (See USDA Agriculture Handbook No. 424 - A System for Visually Classifying Alfalfa Flower Color.).

Please replace the paragraph beginning at page 32, line 7 with the following:

'CW ~~83201~~83021' has high resistance to Fusarium wilt and resistance to anthracnose (race 1), bacterial wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (race 1).

Please replace the title of Table 12 beginning at page 32, line 10 with the following:

Table 12. Selected characteristics of Alfalfa Variety 'CW ~~83201~~83021'

Please replace the title of Table 13 beginning at page 33, line 1 with the following:

Table 13. Yield Performance of alfalfa variety 'CW ~~83201~~83021'.

Please replace the title of Table 14a beginning at page 33, line 4 with the following:

Table 14a. Forage Quality of alfalfa variety 'CW ~~83201~~83021'. A01WIWS - Spring Forage Yield Trial at West Salem, WI.

Please replace the title of Table 14b beginning at page 34, line 1 with the following:

Table 14b. Forage Quality of alfalfa variety 'CW ~~83201~~83021'. E01WIWS - Spring Forage Yield Trial at West Salem, WI.

Please replace the title of Table 15a beginning at page 34, line 5 with the following:

Table 15a. Disease Resistance of alfalfa variety 'CW ~~83201~~83021'.

Please replace the title of Table 15b beginning at page 34, line 9 with the following:

Table 15b. Insect Resistance of alfalfa variety 'CW ~~83201~~83021'.

Please replace the title of Table 15c beginning at page 35, line 1 with the following:

Table 15c. Nematode Resistance of alfalfa variety 'CW ~~83201~~83021'.

Please replace the paragraph beginning at page 50, line 16 with the following:

In one embodiment, this invention provides cells which upon growth and differentiation produce alfalfa plants having all or substantially all of the physiological and morphological characteristics of alfalfa varieties 'CW 75046'; 'CW ~~83201~~83021'; 'CW 85029'; and 'CW 95026'.

Please replace the paragraph beginning at page 51, line 1 with the following:

Initiation of callus from immature anthers, immature ovaries, cotyledons, internode sections, and seedling hypocotyls of 'CW 75046', 'CW ~~83201~~83021', 'CW 85029' and/or 'CW 95026' can be achieved on Blaydes medium supplemented with various combinations and concentrations of kinetin (K), α -naphthalene acetic acid (NAA), and 2,4-dichlorophenoxyacetic acid (2,4-D). See, for example, Saunders, J.W. and E.T. Bingham, Crop Science 12(6):804-808 (1972). Whole alfalfa plants can be produced from the callus tissue, wherein the alfalfa plants have the same or substantially the same morphological and physiological characteristics as the plant from which the calli were derived.